

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 34

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte FUJIO OZAWA, TAKASHI SATO,  
MASAO KASUGA and SHUJI OTAWA

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Appeal No. 1997-0367  
Application No. 08/321,581<sup>1</sup>

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HEARD: December 7, 1999

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Before FLEMING, RUGGIERO, and HECKER, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

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<sup>1</sup> Application for patent filed October 11, 1994. According to appellants, the application is a continuation of Application No. 07/938,178, filed November 27, 1992, now abandoned.

This is a decision on appeal from the final rejection of claims 4-6 and 16-30, all of the claims pending in the present application. Claims 1-3 and 7-15 have been canceled.

The disclosed invention relates to an ultrasonic motor having a vibrating member which is piezoelectrically vibrated for driving and halting a movable member. An ultrasonic vibration generating circuit is included for generating first and second waves for respectively driving and halting the movable member.

Claim 4 is illustrative of the invention and reads as follows:

4. An ultrasonic motor having a movable member frictionally driven by ultrasonic vibration using elastic movement of a piezoelectric vibrator, the ultrasonic motor comprising:

an ultrasonic vibration generating circuit for generating a first standing wave for driving a movable member and a second standing wave for halting the movable member;

a switching circuit for changing operation of the first standing wave for driving the movable member and the second standing wave for halting the movable member;

at least one piezoelectric vibrator step-driven by the ultrasonic vibration generating circuit, the piezoelectric vibrator having electrode patterns for receiving the output signal of the switching circuit, each two adjacent electrode patterns being separated by a boundary;

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a vibrating member on which the at least one piezoelectric vibrator is fixed, the vibrating member having a plurality of projections;

a movable member having a plurality of non-uniform load portions when viewed on a cross section in the direction of its circumference; and

pressure regulating means for contacting the movable member with the vibrating member under pressure;

wherein when the piezoelectric vibrator generates the first standing wave, the projections are disposed at every other one of the intermediate positions between a maximum amplitude portion and a nodal portion of the first standing wave, and each of the projections is located at a boundary between two adjacent electrode patterns; and

wherein when the piezoelectric vibrator generates the second standing wave, the projections are disposed at nodal portions of the second standing wave and each of the projections is located at a boundary between two adjacent electrode patterns.

The Examiner relies on the following prior art:

Ueda et al. (Ueda) 1993	5,237,237	Aug. 17, (Filed Mar. 11, 1991)
Miyazawa et al. (Miyazawa) 1993	5,247,220	Sep. 21, (Filed Oct. 22, 1990)

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Claims 4-6 and 16-30 stand finally rejected under 35 U.S.C. § 102(a) as anticipated by either one of Ueda or Miyazawa.<sup>2</sup>

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Briefs<sup>3</sup> and Answer for the respective details thereof.

#### OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the Examiner and the evidence of anticipation relied upon by the Examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Briefs along with the

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<sup>2</sup> In response to Appellants' arguments in the Brief, the Examiner has withdrawn the anticipatory rejection of the appealed claims based on the U.S. patent to Inoue et al. (5,416,374).

<sup>3</sup> The Appeal Brief was filed January 5, 1996. In response to the Examiner's Answer dated April 12, 1996, a Reply Brief was filed June 17, 1996 which was acknowledged and entered by the Examiner without further comment on July 12, 1996.

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Examiner's rationale in support of the rejection and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that neither Ueda nor Miyazawa fully meets the invention as set forth in claims 4-6 and 16-30. Accordingly, we reverse.

Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

We initially note that the Examiner, despite asserting the anticipatory nature of the disclosures of Ueda and Miyazawa with respect to the appealed claims, has never attempted to show how each of the claimed limitations is met by the prior art. Instead, the Examiner has made a vague

reference to various drawing figure diagrams (Answer, page 3) in Ueda and Miyazawa with no indication as to how these various figures would correspond to any of the claimed features. As such, we are left to speculate as to the Examiner's line of reasoning that would lead to the conclusion of anticipation.

Appellants' initial argument in response (Brief, page 15) asserts the deficiency of Ueda and Miyazawa in disclosing the claimed feature of generating both a driving wave to vibrate the vibrating member to drive the movable member and a halting wave to vibrate the vibrating member to halt the movable member, a feature present in both of the independent claims 4 and 22.

After careful independent review of the Ueda and Miyazawa references in light of the arguments of record, we agree with Appellants' stated position in the Briefs. We find no clear disclosure in either of the applied prior art references that would suggest the generation of a halting wave which would be effective to halt a movable member of an ultrasonic motor. In addition, we agree with Appellants' further assertion (Brief, page 16) that the positional relationship of the projections

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of the vibrating member and the driving and halting waves, set forth in "wherein" clauses in independent claims 4 and 22, is not disclosed in either of Ueda or Miyazawa. We note that the Examiner, in choosing to ignore these stated limitations, states in the penultimate sentence at page 4 of the Answer:

Since the claims are not phrased  
in a means-plus function foremat  
[sic], the "wherein" clauses are  
not seen as structurally limiting.

The Examiner, however, has not provided any legal basis as support for this contention. To the contrary, our reviewing courts have held that, in assessing patentability of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1282, 1385, 165 USPQ 494, 496 (CCPA 1970).

In view of the above discussion, we cannot sustain the Examiner's 35 U.S.C. § 102(a) rejection of independent claims 4 and 22, nor of claims 5, 6, 16-21, and 23-30 dependent thereon.

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In summary, we have not sustained the Examiner's 35  
U.S.C.

§ 102(a) rejection of the claims on appeal. Therefore, the  
decision of the Examiner rejecting claims 4-6 and 16-30 is  
reversed.

REVERSED

MICHAEL R. FLEMING	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
JOSEPH F. RUGGIERO	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
STUART N. HECKER	)	
Administrative Patent Judge	)	

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APJ RUGGIERO

APJ HECKER

APJ FLEMING

DECISION: REVERSED

Send Reference(s): Yes No  
or Translation (s)

Panel Change: Yes No

Index Sheet-2901 Rejection(s):

Prepared: June 16, 2000

Draft                  Final

3 MEM. CONF.    Y    N

OB/HD            GAU

PALM/ACTS 2/BOOK

DISK(FOIA)/REPORT